6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2020-0221; FRL- 10024-71-Region 4]

Air Plan Approval; TN; Knoxville Area Limited Maintenance Plan for the 1997 8-Hour Ozone NAAQS

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a state implementation plan (SIP) revision submitted by the State of Tennessee, through the Tennessee Department of Environment and Conservation (TDEC), Air Pollution Control Division, via a letter dated January 23, 2020. The SIP revision includes the 1997 8-hour ozone national ambient air quality standards (NAAQS) Limited Maintenance Plan (LMP) for the Knoxville, Tennessee Area (hereinafter referred to as the "Knoxville Area" or "Area"). The Knoxville Area, as defined in this proposed action, is comprised of Jefferson, Loudon, and Sevier Counties in their entireties, the portion of Cocke County that falls within the boundary of the Great Smoky Mountains National Park, and a portion of Anderson County that excludes the area surrounding TVA Bull Run Fossil Plant. EPA is proposing to approve the Knoxville Area LMP because it provides for the maintenance of the 1997 8-hour ozone NAAQS within the Knoxville Area through the end of the second 10-year portion of the maintenance period. The effect of this action would be to make certain commitments related to maintenance of the 1997 8-hour ozone NAAQS in the Knoxville Area federally enforceable as part of the Tennessee SIP.

DATES: Written comments must be received at the address below on or before **[Insert date 30 days after date of publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R04-OAR-2020-0221 at http://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Sarah LaRocca, Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. The telephone number is (404) 562-8994. Ms. LaRocca can also be reached via electronic mail at larocca.sarah@epa.gov.

SUPPLEMENTARY INFORMATION:

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I. Summary of EPA's Proposed Action

In accordance with the Clean Air Act (CAA or Act), EPA is proposing to approve the Knoxville Area LMP for the 1997 8-hour ozone NAAQS, adopted by TDEC on January 8, 2020, and submitted by TDEC as a revision to the Tennessee SIP on January 23, 2020. In 2004, the Tennessee counties of Anderson, Blount, Knox, Jefferson, Loudon, and Sevier in their entireties, and a portion of Cocke County were designated as nonattainment for the 1997 8-hour ozone NAAQS (hereinafter referred to as the "Knoxville 1997 NAAQS Area".[1] Subsequently, in 2011, after a clean data determination[2] and EPA's approval of a maintenance plan, the Knoxville 1997 NAAQS Area was redesignated to attainment for the 1997 8-hour ozone NAAQS.

The Knoxville Area LMP, submitted by TDEC on January 23, 2020, is designed to maintain the 1997 8-hour ozone NAAQS within the Knoxville Area through the end of the second 10-year portion of the maintenance period beyond redesignation. EPA is proposing to approve the plan because it meets all applicable requirements under CAA sections 110 and 175A.

As a general matter, the Knoxville Area LMP relies on the same control measures and contingency provisions to maintain the 1997 8-hour ozone NAAQS during the second 10-year portion of the maintenance period as the maintenance plan submitted by TDEC for the first 10-year period.

II. Background

Ground-level ozone is formed when oxides of nitrogen (NOx) and volatile organic compounds (VOC) react in the presence of sunlight. These two pollutants, referred to as ozone precursors, are emitted by many types of pollution sources, including on- and off-road motor vehicles and engines, power plants and industrial facilities, and smaller area sources such as lawn and garden equipment and paints. Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and in adults with lung disease.

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[1] The "Knoxville Area" is a subset of the "Knoxville 1997 NAAQS Area", which is further defined later in this action.

[2] *See* 75 FR 62470 (October 12, 2010).

Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma and other lung diseases.

Ozone exposure also has been associated with increased susceptibility to respiratory infections, medication use, doctor visits, and emergency department visits and hospital admissions for individuals with lung disease. Children are at increased risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors, which increases their exposure.[3]

In 1979, under section 109 of the CAA, EPA established primary and secondary NAAQS for ozone at 0.12 parts per million (ppm), averaged over a 1-hour period. *See* 44 FR 8202 (February 8, 1979). On July 18, 1997, EPA revised the primary and secondary NAAQS for ozone to set the acceptable level of ozone in the ambient air at 0.08 ppm, averaged over an 8-hour period. *See* 62 FR 38856 (July 18, 1997).[4] EPA set the 8-hour ozone NAAQS based on scientific evidence demonstrating that ozone causes adverse health effects at lower concentrations and over longer periods of time than was understood when the pre-existing 1-hour ozone NAAQS was set. EPA determined that the 8-hour ozone NAAQS would be more protective of human health, especially children and adults who are active outdoors, and individuals with a pre-existing respiratory disease, such as asthma.

Following promulgation of a new or revised NAAQS, EPA is required by the CAA to designate areas throughout the nation as attaining or not attaining the NAAQS. On April 15, 2004, EPA designated the Knoxville 1997 NAAQS Area, which is comprised of Anderson, Blount, Knox, Jefferson, Loudon, and Sevier Counties in their entireties, , and the portion of Cocke County that falls within the boundary of the Great Smoky Mountains National Park, as nonattainment for the 1997 8-hour ozone NAAQS, and the designation became effective on June

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[3] *See* "Fact Sheet, Proposal to Revise the National Ambient Air Quality Standards for Ozone," January 6, 2010, and 75 FR 2938 (January 19, 2010).

[4] In March 2008, EPA completed another review of the primary and secondary ozone NAAQS and tightened them further by lowering the level for both to 0.075 ppm. *See* 73 FR 16436 (March 27, 2008). Additionally, in October 2015, EPA completed a review of the primary and secondary ozone NAAQS and tightened them by lowering the level for both to 0.070 ppm. *See* 80 FR 65292 (October 26, 2015).

15, 2004. *See* 69 FR 23858 (April 30, 2004). Similarly, on May 21, 2012, EPA designated areas as unclassifiable/attainment or nonattainment for the 2008 8-hour ozone NAAQS. EPA designated Blount and Knox Counties and the portion of Anderson County surrounding the TVA Bull Run Fossil Plantas nonattainment for the 2008 8-hour ozone NAAQS and classified as a marginal nonattainment area (hereinafter referred to as the "Knoxville 2008 NAAQS Area"). This designation became effective on July 20, 2012.[5] In addition, on November 16, 2017, areas were designated for the 2015 8-hour ozone NAAQS. The Knoxville 1997 NAAQS Area[6] was designated attainment/unclassifiable for the 2015 8-hour ozone NAAQS, with an effective date on January 16, 2018.[7]

A state may submit a request to redesignate a nonattainment area that is attaining a NAAQS to attainment, and, if the area has met other required criteria described in section 107(d)(3)(E) of the CAA, EPA may approve the redesignation request.[8] One of the criteria for redesignation is to have an approved maintenance plan under CAA section 175A. The maintenance plan must demonstrate that the area will continue to maintain the NAAQS for the period extending ten years after redesignation, and it must contain such additional measures as necessary to ensure maintenance and such contingency provisions as necessary to assure that violations of the NAAQS will be promptly corrected. Eight years after the effective date of redesignation, the state must also submit a second maintenance plan to ensure ongoing maintenance of the NAAQS for an additional ten years pursuant to CAA section 175A(b) (i.e., ensuring maintenance for 20 years after redesignation).

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[5] *See* 77 FR 30088.
[6] The "Knoxville 1997 NAAQS Area" encompasses both the "Knoxville Area" and the "Knoxville 2008 NAAQS Area".
[7] *See* 82 FR 54232 (Nov. 16, 2017).
[8] Section 107(d)(3)(E) of the CAA sets out the requirements for redesignating a nonattainment area to attainment. They include attainment of the NAAQS, full approval of the applicable SIP pursuant to CAA section 110(k), determination that improvement in air quality is a result of permanent and enforceable reductions in emissions, demonstration that the state has met all applicable section 110 and part D requirements, and a fully approved maintenance plan under CAA section 175A.

EPA has published long-standing guidance for states on developing maintenance plans.[9] The Calcagni memo provides that states may generally demonstrate maintenance by either performing air quality modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS or by showing that projected future emissions of a pollutant and its precursors will not exceed the level of emissions during a year when the area was attaining the NAAQS (i.e., attainment year inventory). *See* Calcagni memo at page 9. EPA clarified in three subsequent guidance memos that certain areas could meet the CAA section 175A requirement to provide for maintenance by showing that the area was unlikely to violate the NAAQS in the future, using information such as the area's design value[10] being significantly below the standard and the area having a historically stable design value.[11] EPA refers to a maintenance plan containing this streamlined demonstration as an LMP.

EPA has interpreted CAA section 175A as permitting the LMP option because section 175A of the Act does not define how areas may demonstrate maintenance, and in EPA's experience implementing the various NAAQS, areas that qualify for an LMP and have approved LMPs have rarely, if ever, experienced subsequent violations of the NAAQS. As noted in the LMP guidance memoranda, states seeking an LMP must still submit the other maintenance plan elements outlined in the Calcagni memo, including: an attainment emissions inventory, provisions for the continued operation of the ambient air quality monitoring network, verification of continued attainment, and a contingency plan in the event of a future violation of the NAAQS. Moreover, a state seeking an LMP must still submit its section 175A maintenance plan as a revision to its SIP, with all attendant notice and comment procedures. While the LMP guidance

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[9] John Calcagni, Director, Air Quality Management Division, EPA Office of Air Quality Planning and Standards (OAQPS), "Procedures for Processing Requests to Redesignate Areas to Attainment," September 4, 1992 (Calcagni memo).

[10] The ozone design value for a monitoring site is the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations. The design value for an ozone area is the highest design value of any monitoring site in the area.

[11] *See* "Limited Maintenance Plan Option for Nonclassifiable Ozone Nonattainment Areas" from Sally L. Shaver, OAQPS, dated November 16, 1994; "Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas" from Joseph Paisie, OAQPS, dated October 6, 1995; and "Limited Maintenance Plan Option for Moderate PM_{10} Nonattainment Areas" from Lydia Wegman, OAQPS, dated August 9, 2001. Copies of these guidance memoranda can be found in the docket for this proposed rulemaking.

memoranda were originally written with respect to certain NAAQS,[12] EPA has extended the LMP interpretation of section 175A to other NAAQS and pollutants not specifically covered by the previous guidance memos.[13]

In this case, EPA is proposing to approve Tennessee's LMP because the State has made a showing, consistent with EPA's prior LMP guidance, that the Area's ozone concentrations are well below the 1997 8-hour ozone NAAQS and have been historically stable and that it has met the other maintenance plan requirements. TDEC submitted this LMP for the Knoxville Area to fulfill the second maintenance plan requirement in the Act. EPA's evaluation of the Knoxville Area's LMP is presented below.

In July of 2010, TDEC submitted to EPA a request to redesignate the Knoxville 1997 NAAQS Area to attainment for the 1997 8-hour ozone NAAQS. This submittal included a plan to provide for maintenance of the 1997 8-hour ozone NAAQS in the Knoxville 1997 NAAQS Area through 2024 as a revision to the Tennessee SIP. EPA approved the Knoxville 1997 NAAQS Area's Maintenance Plan and the State's request to redesignate the Knoxville 1997 NAAQS Area to attainment for the 1997 8-hour ozone NAAQS effective March 8, 2011. [14]

Under CAA section 175A(b), states must submit a revision to the first maintenance plan eight years after redesignation to provide for maintenance of the NAAQS for ten additional years following the end of the first 10-year period. EPA's final implementation rule for the 2008 8-hour ozone NAAQS revoked the 1997 8-hour ozone NAAQS and stated that one consequence of revocation was that areas that had been redesignated to attainment (i.e., maintenance areas) for the 1997 NAAQS no longer needed to submit second 10-year maintenance plans under CAA section 175A(b).[15] On July 13, 2015, EPA redesignated the Knoxville 2008 NAAQS Area as

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[12] The prior memos addressed: unclassifiable areas under the 1-hour ozone NAAQS, nonattainment areas for the PM_{10} (particulate matter with an aerodynamic diameter less than 10 microns) NAAQS, and nonattainment for the carbon monoxide (CO) NAAQS.

[13] *See, e.g.*, 79 FR 41900 (July 18, 2014) (Approval of the second ten-year LMP for the Grant County 1971 SO_2 maintenance area).

[14] *See* 76 FR 12587 (March 8, 2011).

[15] *See* 80 FR 12315 (March 6, 2015).

attainment for the 2008 8-hour ozone NAAQS, and the designation became effective on August 12, 2015. *See* 80 FR 39970 (July 13, 2015).

In *South Coast Air Quality Management District v. EPA*, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated EPA's interpretation that, because of the revocation of the 1997 8-hour ozone NAAQS, second maintenance plans were not required for "orphan maintenance areas," i.e., areas that had been redesignated to attainment for the 1997 8-hour ozone NAAQS maintenance areas and were designated attainment for the 2008 ozone NAAQS. *South Coast*, 882 F.3d 1138 (D.C. Cir. 2018). Thus, states with these "orphan maintenance areas" under the 1997 8-hour ozone NAAQS must submit maintenance plans for the second maintenance period. Accordingly, on January 23, 2020, Tennessee submitted a second maintenance plan for the Knoxville Area that shows that the Area is expected to remain in attainment of the 1997 8-hour ozone NAAQS through 2031.

In recognition of the continuing record of air quality monitoring data showing ambient 8-hour ozone concentrations in the Knoxville Area well below the 1997 8-hour ozone NAAQS, TDEC chose the LMP option for the development of its second 1997 8-hour ozone NAAQS maintenance plan. On January 8, 2020, TDEC adopted the second 10-year 1997 8-hour ozone maintenance plan, and on January 23, 2020, TDEC submitted the Knoxville Area LMP to EPA as a revision to the Tennessee SIP.

III. Tennessee's SIP Submittal

As mentioned above, on January 23, 2020, TDEC submitted the Knoxville Area 1997 8-Hour Ozone NAAQS LMP to EPA as a revision to the Tennessee SIP. The submittal includes the LMP, air quality data, emissions inventory information, and appendices as well as certification of adoption of the plan by TDEC. Appendices to the plan include comments and responses between EPA and TDEC; documentation of notice, hearing, and public participation prior to adoption of the plan by TDEC on January 8, 2020; interagency consultation; and Air Pollution Control Board order, which notes that Tennessee's LMP submittal for the remainder of

the 20-year maintenance period for the Knoxville Area is in response to the D.C. Circuit's decision overturning aspects of EPA's Implementation Plan rule. The Knoxville Area LMP does not include any additional emissions reduction measures but relies on the same emissions reduction strategy as its first 10-year Maintenance Plan that provides for the maintenance of the 1997 8-hour ozone NAAQS through 2024. Specifically, the measures upon which the second 10-year LMP for the Knoxville Area relies include the continuation of the stage 1 gasoline vapor recovery rule and a statewide Motor Vehicle Tampering rule in Chapter 1200-03-36. It also relies on continued implementation of federal measures (e.g., interstate transport rules such as Cross State Air Pollution Rule (CSAPR)[16] and CSAPR Update[17]).

IV. EPA's Evaluation of Tennessee's SIP Submittal

EPA has reviewed the Knoxville Area's LMP which is designed to maintain the 1997 8-hour ozone NAAQS within the Knoxville Area through the end of the 20-year period beyond redesignation, as required under CAA section 175A(b). The following is a summary of EPA's interpretation of the section 175A requirements[18] and EPA's evaluation of how each requirement is met.

A. Attainment Emissions Inventory

For maintenance plans, a state should develop a comprehensive, accurate inventory of actual emissions for an attainment year to identify the level of emissions which is sufficient to maintain the NAAQS. A state should develop this inventory consistent with EPA's most recent guidance on emissions inventory development. For ozone, the inventory should be based on typical summer day emissions of VOC and NOx, as these pollutants are precursors to ozone formation. The Knoxville Area's LMP includes an ozone attainment inventory for the Knoxville Area that reflects typical summer day emissions in 2014. Table 1 and Table 2 present a summary of the inventory for 2014 contained in the LMP.

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[16] *See* 76 FR 48208 (August 8, 2011).
[17] *See* 81 FR 74504 (October 26, 2016).
[18] *See* Calcagni memo.

TABLE 1—2014 Typical Summer Day 8-Hour NOx Emissions for the Knoxville Area (tons/summer day)

County	Fire	Nonpoint	Nonroad	Onroad	Point	Total
Anderson	0.00*	1.70	0.81	5.35	4.93	12.79
Cocke	0.00**	0.39	0.41	3.34	0.09	4.23*
Jefferson	0.00*	0.56	1.05	7.97	0.00	9.58
Loudon	0.00*	0.64	0.77	5.45	2.31	9.17
Sevier	0.09	0.23	0.90	6.05	0.16	7.43*
Total	0.09	3.52	3.94	28.16*	7.49	43.20*

* These total emissions values for both NO_X and VOC, respectively, differ from Tennessee's submittal and have been re-calculated to accurately reflect the total for each sector and county.[19]
** The values, while greater than zero, do not meet the two significant figure rounding convention.

TABLE 2—2014 Typical Summer Day 8-Hour VOC Emissions for the Knoxville Area (tons/summer day)

County	Fire	Nonpoint	Nonroad	Onroad	Point	Total
Anderson	0.00*	6.79	1.85	3.14	0.64	12.42
Cocke	0.00**	1.67	2.44	1.47	0.31	5.89*
Jefferson	0.00*	2.80	2.90	2.57	0.26	8.53
Loudon	0.00*	2.03	1.93	2.08	4.55	10.59*
Sevier	1.43	2.76	6.72	3.31	0.03	14.25*
Total	1.43	16.05	15.84*	12.57*	5.79	51.68*

* These total emissions values for both NO_X and VOC, respectively, differ from Tennessee's submittal and have been re-calculated to accurately reflect the total for each sector and county.[20]
** The values, while greater than zero, do not meet the two significant figure rounding convention.

The Emissions Inventory section of the Knoxville Area's LMP describes the methods, models, and assumptions used to develop the attainment inventory. As described in the Emissions Inventory section of the LMP, TDEC generally relied upon emissions inventory information from the EPA 2014 version 7.0 air quality modeling platform (2014v7.0 platform),

[19] *See* email from James Johnston, TDEC, to Lynorae Benjamin, EPA Region 4 (December 15, 2020), available in the docket for this proposed rulemaking.
[20] See email from James Johnston, TDEC, to Lynorae Benjamin, EPA Region 4 (December 15, 2020), available in the docket for this proposed rulemaking.

which is based on the 2014 NEI. The emissions data in the 2014v7.0 platform are primarily based on the 2014NEIv1 for point sources, nonpoint sources, commercial marine vessels (CMV), onroad and nonroad mobile sources, and fires. This 2014 modeling platform includes all criteria air pollutants (CAPs) and precursors and two groups of hazardous air pollutants (HAPs).

Nonroad mobile source emissions in the 2014NEIv1, in part, were estimated using the latest available version of EPA's motor vehicle emissions model, MOVES 2014a (which includes estimates of nonroad emissions like agriculture, commercial and mining, industrial and recreational equipment, and commercial and residential lawn and garden equipment). Locomotives, aircraft, and marine nonroad sources are not included in MOVES, and TDEC relied on EPA-generated emissions for these sectors.[21] Onroad mobile sources in the 2014NEIv1, were estimated using MOVES2014a and the latest planning assumptions regarding vehicle type, activity, and vehicle speeds to estimate vehicular emissions for 2014. MOVES2014a was used with inputs, where provided, by state and local agencies, in combination with EPA-generated default data. In its entirety, the 2014v7.0 platform estimates for vehicles reflect emissions inventories and ancillary data files used for emissions modeling, as well as the meteorological, initial condition, and boundary condition files need to run the air quality model.

B. Maintenance Demonstration

The maintenance demonstration requirement is considered to be satisfied in a LMP if the state can provide sufficient weight of evidence indicating that air quality in the area is well below the level of the NAAQS, that past air quality trends have been shown to be stable, and that the probability of the area experiencing a violation over the second 10-year maintenance period is low.[22] These criteria are evaluated below with regard to the Knoxville Area.

1. Evaluation of ozone air quality levels.

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[21] EPA developed emissions for these sectors based on AP-42 emissions factors, and information supplied by the Eastern Regional Technical Advisory Committee for locomotives and Federal Aviation Administration's Emissions and Dispersion Modeling System (since replaced by the Aviation Environmental Design Tool).

[22] See footnote 9.

To attain the 1997 8-hour ozone NAAQS, the three-year average of the fourth-highest daily maximum 8-hour average ozone concentrations (design value) at each monitor within an area must not exceed 0.08 ppm. Based on the rounding convention described in 40 CFR part 50, Appendix I, the NAAQS is attained if the design value is 0.084 ppm or below. At the time of submission, EPA evaluated quality assured and certified 2016–2018 monitoring data and determined that the design value for the Knoxville Area was 0.067 ppm, or 80 percent of the level of the 1997 8-hour ozone NAAQS. Based on quality assured and certified monitoring data for 2018-2020, the current design value for the Knoxville Area is 0.063 ppm, or 75 percent of the level of the 1997 8-hour ozone NAAQS. Consistent with prior guidance, EPA believes that if the most recent air quality design value for the area is at a level that is well below the NAAQS (e.g., below 85 percent of the NAAQS, or in this case below 0.071 ppm), then EPA considers the state to have met the section 175A requirement for a demonstration that the area will maintain the NAAQS for the requisite period. Such a demonstration assumes continued applicability of prevention of significant deterioration requirements and any control measures already in the SIP and that Federal measures will remain in place through the end of the second 10-year maintenance period, absent a showing consistent with section 110(l) that such measures are not necessary to assure maintenance.

Table 3 presents the design values for each monitor in the Knoxville Area over the 2008–2020 period. As shown in Table 3, all sites have been below the level of the 1997 8-hour ozone NAAQS since the area was redesignated to attainment, and the most current design value is below the level of 85 percent of the NAAQS, consistent with prior LMP guidance.

Table 3 — 1997 8-Hour Ozone NAAQS Design Values (ppm) at Monitoring Sites in the Knoxville 1997 NAAQS Area for the 2008-2020 Time Period

Location	County	AQS Site ID	2008-2010 DV	2009-2011 DV	2010-2012 DV	2011-2013 DV	2012-2014 DV	2013-2015 DV	2014-2016 DV	2015-2017 DV	2016-2018 DV	2017-2019 DV	2018-2020 DV
Freels Bend	Anderson	47-001-0101	0.07	0.07	0.073	0.069	*	0.061	0.063	0.064	0.064	0.064	0.061

Look Rock	Blount	47-009-0101	0.077	0.077	0.079	0.074	0.067	0.065	0.067	0.067	0.067	0.065	0.063
Cades Cove	Blount	47-009-0102	0.069	0.068	0.068	0.063	0.060	0.059	0.060	0.061	0.062	0.060	0.058
New Market	Jefferson	47-089-0002	0.074	0.073	0.078	0.073	0.071	0.067	0.068	0.067	0.066	0.065	0.063
East Knox	Knox	47-093-0021	0.071	0.069	0.071	0.067	0.063	0.061	0.064	0.064	0.065	0.063	0.061
Spring Hill	Knox	47-093-1020	0.076	0.071	0.074	0.070	0.067	0.063	0.066	0.067	0.067	0.063	0.058
Loudon+	Loudon	47-105-0109	0.073	0.072	0.075	0.070	0.068	0.066	0.069	0.068	0.067	0.063	0.062
Cove Mountain	Sevier	47-155-0101	0.076	0.075	0.076	0.072	0.068	0.067	0.067	0.066	0.066	0.065	0.063
Clingman's Dome^	Sevier	47-155-0102	0.076^	0.075^	0.075^	0.071^	0.067^	0.065^	0.066^	0.065^	0.065^	0.063	0.063

***** Incomplete design value due to annual values not meeting completeness criteria.

+ On March 16, 2016, the EPA approved the relocation of the Loudon Pope monitoring site (AQS ID 47-105-0108) to the Loudon Elementary School monitoring site (AQS ID 47-105-0109). The ozone monitor was relocated to the Loudon Elementary School site on March 3, 2017. The EPA approved the calculation of a combined DV for the Loudon Pope site and the Loudon Elementary School site. Design values prior to 2017 are calculated using data from the Loudon Pope monitoring site.[23]

^ The Clingman's Dome site has limited accessibility and difficulty in using the site's solar power system during the winter months. Due to the limited access in the first two months of the ozone season, annual design values did not meet data completeness. A waiver for a delayed ozone season starting no later than May 1 for the Clingman's Dome monitor was submitted by the National Park Service on April 28, 2016, and approved by EPA on May 3, 2016.

Therefore, the Knoxville Area is eligible for the LMP option, and EPA proposes to find that the long record of monitored ozone concentrations that attain the NAAQS, together with the continuation of existing VOC and NOx emissions control programs, adequately provide for the maintenance of the 1997 8-hour ozone NAAQS in the Knoxville Area through the second 10-year maintenance period and beyond.

Additional supporting information that the Area is expected to continue to maintain the NAAQS can be found in projections of future year design values that EPA recently completed to assist states with development of interstate transport SIPs for the 2015 ozone NAAQS.[24] Those projections, made for the year 2023, show that the highest design value of any monitor in the Knoxville Area is expected to be 0.058 ppm.

2. Stability of ozone levels

[23] In the 2017 Annual Network Plan approval letter, EPA approved a combined design value for ozone monitors 47-105-0108 and 47-105-0109 in Loudon County due to relocation of monitor. EPA's approval letter of the 2017 Annual Network Plan can be found in the docket for this action.

[24] See the spreadsheet titled "Ozone Monitoring Site Design Values for 2008 through 2017 and for 2023" at https://www.epa.gov/airmarkets/memo-and-supplemental-information-regarding-interstate-transport-sips-2015-ozone-naaqs.

As discussed above, the Knoxville Area has maintained air quality well below the 1997 8-hour ozone NAAQS over the past eleven years. Additionally, the design value data shown within Table 3 illustrates that ozone levels have been relatively stable over this timeframe, with a modest downward trend. For example, the data within Table 3 indicates that the largest, year over year change in design value at any one monitor during these eleven years was five parts per billion which occurred between the 2009-2011 design value and the 2010-2012 design value as an increase, representing only a seven percent change, and between the 2017-2019 design value and the 2018-2020 design value as a decrease, representing an eight percent change. Furthermore, the overall trend in design values for the Knoxville 1997 NAAQS Area between 2008–2020 shows a decrease of 17 to 18 percent at the three highest monitors, Cove Mountain monitor 47-155-0101, Clingman's Dome monitor 47-155-0102, and Blount County monitor 47-009-0101 respectively. This downward trend in ozone levels, coupled with the relatively small, year-over-year variation in ozone design values, makes it reasonable to conclude that the Knoxville Area will not exceed the 1997 8-hour ozone NAAQS during the second 10-year maintenance period.

3. Projected emissions

Although under the LMP option there is no requirement to project emissions over the maintenance period, TDEC included an analysis of ozone precursor emissions trends expected over the course of the second maintenance plan. TDEC provided a VOC and NOx emissions trends analysis from 2014 to 2028. Tennessee selected 2014 as a baseline for the projection because that was the most recent year for which a complete set of data was available from the EPA's National Emissions Inventory (NEI) database at the time that the State developed its second maintenance plan for the Area.[25] Projected emissions data for the year 2028 were obtained from EPA[26], and these data represent EPA emissions projections that are available for a

[25] The 2017 NEI is the most recent NEI, but it was unavailable to Tennessee when the State developed its SIP revision.
[26] https://www.epa.gov/air-emissions-modeling/2014-2016-version-7-air-emissions-modeling-platforms.

date furthest out into the future.[27] The emissions projection trends show that between 2014 and 2028, VOC emissions are estimated to fall by 40 percent, and NOx emissions are estimated to fall by 38 percent within the Knoxville Area. These projected declining emissions trends further support the conclusion that it is unlikely that the Knoxville Area would violate the 1997 8-hour ozone NAAQS in the future. Table 4 and Table 5 present a summary of projected emissions for 2028 contained in the maintenance plan.

TABLE 4—2028 Typical Summer Day 8-Hour NOx Emissions for the Knoxville Area (tons/summer day)

County	Fire	Nonpoint	Nonroad	Onroad	Point	Total
Anderson	0.00**	4.39	0.47	1.29	6.69	12.84
Cocke	0.02	0.37	0.28	1.21	0.04	1.92*
Jefferson	0.00*	0.62	0.74	3.04	0.08	4.48*
Loudon	0.00*	0.84	0.49	2.26	1.60	5.19*
Sevier	0.04	0.31	0.57	1.27	0.12	2.31*
Total	0.06*	6.53	2.55	9.07	8.53	26.74*

* These total emissions values for both NOx and VOC, respectively, differ from Tennessee's submittal and have been re-calculated to accurately reflect the total for each sector and county.[19]
** The values, while greater than zero, do not meet the two significant figure rounding convention.

TABLE 5—2028 Typical Summer Day 8-Hour VOC Emissions for the Knoxville Area (tons/summer day)

County	Fire	Nonpoint	Nonroad	Onroad	Point	Total
Anderson	0.00**	5.75	1.19	0.70	0.95	8.59*
Cocke	0.22	1.33	1.45	0.41	0.35	3.76*
Jefferson	0.00*	2.23	1.37	0.76	0.16	4.52
Loudon	0.00*	1.96	1.09	0.71	1.61	5.37
Sevier	0.45	3.11	4.25	0.89	0.02	8.72

[27] EPA's emissions projections to 2028 were made from the 2011 NEI, as that iteration of the NEI was the most recently available version when the projection work was performed. Although this projection does not correspond exactly with the end of the second ten-year maintenance period, it provides additional support for EPA's proposed finding that the Area will maintain the NAAQS due to its low and historically stable design values. See the Emissions Inventory section of the LMP for additional information regarding the 2028 projections.

Total	0.67	14.38	9.35*	3.47*	3.09*	30.96*

* These total emissions values for both NOx and VOC, respectively, differ from Tennessee's submittal and have been re-calculated to accurately reflect the total for each sector and county.[19]
** The values, while greater than zero, do not meet the two significant figure rounding convention.

C. Monitoring Network and Verification of Continued Attainment

EPA periodically reviews the ozone monitoring network that TDEC operates and maintains in accordance with 40 CFR part 58. This network plan, which is submitted annually to EPA, is consistent with the ambient air quality monitoring network assessment. The annual network plan developed by TDEC follows a public notification and review process. EPA has reviewed and approved the State's 2020 Ambient Air Monitoring Network Plan ("2020 Annual Network Plan").[28]

To verify the attainment status of the Area over the maintenance period, the maintenance plan should contain provisions for continued operation of an appropriate, EPA-approved monitoring network in accordance with 40 CFR part 58. As noted above, TDEC's monitoring network in the Knoxville 1997 NAAQS Area has been approved by EPA in accordance with 40 CFR part 58, and the State has committed to continue to maintain a network in accordance with EPA requirements. EPA therefore proposes to find that TDEC's monitoring network is adequate to verify continued attainment of the 1997 8-hour ozone NAAQS in the Knoxville Area.

D. Contingency Plan

Section 175A(d) of the CAA requires that a maintenance plan include contingency provisions. The purpose of such contingency provisions is to prevent future violations of the NAAQS or to promptly remedy any NAAQS violations that might occur during the maintenance period. These contingency measures are required to be implemented expeditiously once they are triggered by a future violation of the NAAQS or some other trigger. The state should identify

[28] The letter approving the network plan is in the docket for this proposed rulemaking.

specific triggers which will be used to determine when the contingency measures need to be implemented.

The LMP states that the trigger is a Quality Assured/Quality Controlled (QA/QC) violating design value of the 1997 8-hour ozone NAAQS in the Knoxville Area.[29] If this trigger is activated, the maintenance plan requires Tennessee to conduct a study to determine the cause of the higher ozone value, whether from an event not likely to recur or from an increasing trend in emissions that threatens the continued maintenance of the NAAQS. Tennessee will adopt and implement appropriate contingency measures tailored to the source of the violation (or increased concentrations) as expeditiously as practicable, but no later than 18 to 24 months after the trigger event.[30]

EPA proposes to find that the contingency provisions in Tennessee's second maintenance plan for the 1997 8-hour Ozone NAAQS meet the requirements of the CAA section 175A(d).

E. Conclusion

EPA proposes to find that the Knoxville Area LMP for the 1997 8-hour ozone NAAQS includes an approvable update of the various elements (including attainment inventory, assurance of adequate monitoring and verification of continued attainment, and contingency provisions) of the initial EPA-approved Maintenance Plan for the 1997 8-hour ozone NAAQS. EPA also proposes to find that the Knoxville Area, qualifies for the LMP option, and adequately demonstrates maintenance of the 1997 8-hour ozone NAAQS through the documentation of monitoring data showing maximum 1997 8-hour ozone levels below the NAAQS and historically stable design values. EPA believes the Knoxville Area's LMP, which retains all existing control measures in the SIP, is sufficient to provide for maintenance of the 1997 8-hour ozone NAAQS in the Knoxville Area over the second maintenance period (i.e., through 2031) and thereby

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[29] If QA/QC data indicates a violating design value for the 8-hour ozone NAAQS, then the triggering event will be the date of the design value violation, and not the final QA/QC date. However, if initial monitoring data indicates a possible design value violation but later QA/QC indicates that a NAAQS violation did not occur, then a triggering even will not have occurred, and contingency measures will not need to be implemented.

[30] See the Contingency Plan section of the LMP for further information regarding the contingency plan, including measures that Tennessee will consider for adoption if the trigger is activated.

satisfies the requirements for such a plan under CAA section 175A(b). EPA is therefore proposing to approve Tennessee's January 23, 2020, submission of the Knoxville Area's LMP as a revision to the Tennessee SIP.

V. Transportation Conformity and General Conformity

Transportation conformity is required by section 176(c) of the CAA. Conformity to a SIP means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. *See* CAA 176(c)(1)(A) and (B). EPA's transportation conformity rule at 40 CFR part 93 subpart A requires that transportation plans, programs, and projects conform to SIPs and establishes the criteria and procedures for determining whether they conform. The conformity rule generally requires a demonstration that emissions from the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP) are consistent with the motor vehicles emissions budget (MVEB) contained in the control strategy SIP revision or maintenance plan. *See* 40 CFR 93.101, 93.118, and 93.124. A MVEB is defined as "the portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions." *See* 40 CFR 93.101.

Under the conformity rule, LMP areas may demonstrate conformity without a regional emissions analysis. *See* 40 CFR 93.109(e). On September 15, 2010, EPA made a finding that the MVEBs for the first 10 years of the 1997 8-hour ozone maintenance plan for the Knoxville 1997 NAAQS Area were adequate for transportation conformity purposes. In a Federal Register notice dated September 15, 2010, EPA notified the public of that finding. *See* 75 FR 55977. This adequacy determination became effective on September 30, 2010. After approval of this LMP or an adequacy finding for this LMP, there is no requirement to meet the budget test pursuant to the transportation conformity rule for the maintenance area. All actions that would

require a transportation conformity determination for the Knoxville 1997 NAAQS Area under EPA's transportation conformity rule provisions are considered to have already satisfied the regional emissions analysis and "budget test" requirements in 40 CFR 93.118 as a result of EPA's adequacy finding for this LMP. *See* 69 FR 40004 (July 1, 2004). The Knoxville 2008 NAAQS Area needs to continue to meet all of the applicable requirements of the transportation conformity regulations, including the need for a regional emissions analysis and comparison of the results of the regional emissions analysis to the applicable MVEB for the 2008 8-hour ozone NAAQS.

However, because LMP areas are still maintenance areas, certain aspects of transportation conformity determinations still will be required for transportation plans, programs, and projects. Specifically, for such determinations, RTPs, TIPs, and transportation projects still will have to demonstrate that they are fiscally constrained (40 CFR 93.108) and meet the criteria for consultation (40 CFR 93.105) and Transportation Control Measure implementation in the conformity rule provisions (40 CFR 93.113) as well as meet the hot-spot requirements for projects (40 CFR 93.116).[31] Additionally, conformity determinations for RTPs and TIPs must be determined no less frequently than every four years, and conformity of plan and TIP amendments and transportation projects is demonstrated in accordance with the timing requirements specified in 40 CFR 93.104. In addition, in order for projects to be approved they must come from a currently conforming RTP and TIP. *See* 40 CFR 93.114 and 40 CFR 93.115. The Knoxville 2008 NAAQS Area must continue to meet all of the applicable requirements of the general conformity regulations.

VI. Proposed Action

Under sections 110(k) and 175A of the CAA and for the reasons set forth above, EPA is proposing to approve the Knoxville Area's LMP for the 1997 8-hour ozone NAAQS, submitted

[31] A conformity determination that meets other applicable criteria in Table 1 of paragraph (b) of this section (93.109(e)) is still required, including the hot-spot requirements for projects in CO, PM_{10}, and fine particulate matter ($PM_{2.5}$) areas.

by TDEC on January 23, 2020, as a revision to the Tennessee SIP. EPA is proposing to approve the Knoxville Area LMP because it includes an acceptable update of the various elements of the 1997 8-hour ozone NAAQS Maintenance Plan approved by EPA for the first 10-year period (including emissions inventory, assurance of adequate monitoring and verification of continued attainment, and contingency provisions), and retains the relevant provisions of the SIP.

EPA also finds that the Knoxville Area qualifies for the LMP option and that therefore the Knoxville Area's LMP adequately demonstrates maintenance of the 1997 8-hour ozone NAAQS through documentation of monitoring data showing maximum 1997 8-hour ozone levels well below the NAAQS and continuation of existing control measures. EPA believes the Knoxville Area's 1997 8-Hour Ozone LMP to be sufficient to provide for maintenance of the 1997 8-hour ozone NAAQS in the Knoxville Area over the second 10-year maintenance period, through 2031, and thereby satisfy the requirements for such a plan under CAA section 175A(b).

VII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. This proposed action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental Protection, Air Pollution Control, Incorporation by reference, Intergovernmental Relations, Nitrogen Oxides, Ozone, Reporting and Recordkeeping Requirements, Volatile Organic Compounds.

Authority: 42 U.S.C. 7401 et seq.

Dated: June 4, 2021.

John Blevins,
Acting Regional Administrator,
Region 4.

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